

WHAT IS CLAIMED IS:

1. A bicycle sealing assembly comprising:
 - a first dust cap configured and arranged to be attached to a rotational part of a bicycle;
 - a second dust cap configured and arranged to be attached to a fixed part of a bicycle;
 - a first sealing member disposed between the first dust cap and either the fixed part or the second dust cap to form a first seal therebetween; and
 - a second sealing member disposed between the second dust cap and either the first dust cap or the rotational part to form a second seal therebetween.
2. The bicycle sealing assembly as recited in claim 1, wherein
 - the first sealing member contacts a radially inwardly facing surface of the first dust cap; and
 - the second sealing member contacts a radially outwardly facing surface of the second dust cap.
3. The bicycle sealing assembly as recited in claim 1, wherein
 - the second dust cap includes an abutment portion contacting the second sealing member and arranged to prevent axial movement of the second sealing member along a contact surface of the second dust cap.
4. The bicycle sealing assembly as recited in claim 1, wherein
 - the first sealing member is configured and arranged to contacts a seal base nut that forms a portion of the fixed part of the bicycle.
5. The bicycle sealing assembly as recited in claim 1, wherein
 - the first dust cap includes an inner portion extending in an axial direction; and
 - the second dust cap includes an outer portion extending in an axial direction and arranged to overlap with the inner portion of the first dust cap.
6. The bicycle sealing assembly as recited in claim 1, wherein
 - the second sealing member is press fitted on the first dust cap or the rotational part.

7. The bicycle sealing assembly as recited in claim 1, wherein the first sealing member is configured and arranged relative to the first dust cap, the fixed part of the bicycle and the second dust cap to float in an axial direction.

8. The bicycle sealing assembly as recited in claim 1, wherein the second sealing member includes an outer seal surface contacting the radially inwardly facing surface of the first dust cap and an inner seal surface contacting the radially outwardly facing surface of the second dust cap.

9. The bicycle sealing assembly as recited in claim 3, wherein the first sealing member includes an outer seal surface contacting the radially inwardly facing surface of the first dust cap.

10. The bicycle sealing assembly as recited in claim 9, wherein the first dust cap includes an inner portion extending in an axial direction with the radially inwardly facing surface formed thereon, the second dust cap includes an outer portion extending in an axial direction with the radially outwardly facing surface formed thereon, and the inner portion of the first dust cap being arranged to overlap with the outer portion of the second dust cap.

11. The bicycle sealing assembly as recited in claim 10, wherein the inner portion of the first dust cap is arranged below the outer portion of the second dust cap.

12. The bicycle sealing assembly as recited in claim 1, wherein the first and second dust caps are made of a sheet metal material.

13. The bicycle sealing assembly as recited in claim 3, wherein the abutment portion has an angled abutment surface that is angled approximately thirty degrees relative to a line parallel to a center axis of the bicycle sealing assembly.

14. The bicycle sealing assembly as recited in claim 1, wherein the first sealing member contacts the first dust cap and the fixed part to form the first seal therebetween.

15. The bicycle sealing assembly as recited in claim 14, wherein the second sealing member contacts the second dust cap and the first dust cap to form the second seal therebetween.

16. The bicycle sealing assembly as recited in claim 1, wherein the second sealing member contacts the second dust cap and the first dust cap to form the second seal therebetween.

17. The bicycle sealing assembly as recited in claim 1, wherein the first sealing member contacts the first dust cap and second dust cap to form the first seal therebetween.

18. The bicycle sealing assembly as recited in claim 17, wherein the second sealing member contacts the second dust cap and the rotational part to form the second seal therebetween.

19. The bicycle sealing assembly as recited in claim 1, wherein the second sealing member contacts the second dust cap and the rotational part to form the second seal therebetween.

20. A bicycle component comprising:
a fixed part with a center axis;
a rotatable part having an inner tubular surface forming a central passage, the fixed part being rotatably disposed within the central passage of the rotatable part; and
a bicycle sealing assembly disposed between the fixed part and the rotatable part, the bicycle sealing assembly including
a first dust cap coupled to the rotatable part,
a second dust cap coupled to the fixed part,

a first sealing member disposed between the first dust cap and either the fixed part or the second dust cap to form a first seal therebetween, and
a second sealing member disposed between the second dust cap and either the first dust cap or the rotatable part to form a second seal therebetween.

21. The bicycle component as recited in claim 20, wherein the fixed part is a hub axle, and the rotatable part is a freewheel.

22. The bicycle component as recited in claim 20, wherein the fixed part is a hub axle, and the rotatable part is a hub shell.

23. The bicycle component as recited in claim 20, wherein the first sealing member contacts a radially inwardly facing surface of the first dust cap; and
the second sealing member contacts a radially outwardly facing surface of the second dust cap.

24. The bicycle component as recited in claim 20, wherein the second dust cap includes an abutment portion contacting the second sealing member and arranged to prevent axial movement of the second sealing member along a contact surface of the second dust cap.

25. The bicycle component as recited in claim 20, wherein the first sealing member is configured and arranged to contacts a seal base nut that forms a portion of the fixed part of the bicycle.

26. The bicycle component as recited in claim 20, wherein the first dust cap includes an inner portion extending in an axial direction; and
the second dust cap includes an outer portion extending in an axial direction and arranged to overlap with the inner portion of the first dust cap.

27. The bicycle component as recited in claim 20, wherein the second sealing member is press fitted on the first dust cap or the rotational part.

28. The bicycle component as recited in claim 20, wherein the first sealing member is configured and arranged relative to the first dust cap, the fixed part of the bicycle and the second dust cap to float in an axial direction.

29. The bicycle component as recited in claim 20, wherein the second sealing member includes an outer seal surface contacting the radially inwardly facing surface of the first dust cap and an inner seal surface contacting the radially outwardly facing surface of the second dust cap.

30. The bicycle component as recited in claim 24, wherein the first sealing member includes an outer seal surface contacting the radially inwardly facing surface of the first dust cap.

31. The bicycle component as recited in claim 30, wherein the first dust cap includes an inner portion extending in an axial direction with the radially inwardly facing surface formed thereon, the second dust cap includes an outer portion extending in an axial direction with the radially outwardly facing surface formed thereon, and the inner portion of the first dust cap being arranged to overlap with the outer portion of the second dust cap.

32. The bicycle component as recited in claim 31, wherein the inner portion of the first dust cap is arranged below the outer portion of the second dust cap.

33. The bicycle component as recited in claim 20, wherein the first and second dust caps are made of a sheet metal material.

34. The bicycle component as recited in claim 24, wherein the abutment portion has an angled abutment surface that is angled approximately thirty degrees relative to a line parallel to a center axis of the bicycle sealing assembly.

35. The bicycle sealing assembly as recited in claim 20, wherein the first sealing member contacts the first dust cap and the fixed part to form the first seal therebetween.

36. The bicycle sealing assembly as recited in claim 35, wherein the second sealing member contacts the second dust cap and the first dust cap to form the second seal therebetween.

37. The bicycle sealing assembly as recited in claim 20, wherein the second sealing member contacts the second dust cap and the first dust cap to form the second seal therebetween.

38. The bicycle sealing assembly as recited in claim 30, wherein the first sealing member contacts the first dust cap and second dust cap to form the first seal therebetween.

39. The bicycle sealing assembly as recited in claim 38, wherein the second sealing member contacts the second dust cap and the rotational part to form the second seal therebetween.

40. The bicycle sealing assembly as recited in claim 20, wherein the second sealing member contacts the second dust cap and the rotational part to form the second seal therebetween.